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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,115

02/10/2004

Yoshinori Iwaizono

28569.7436

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20322 7590 07/10/2008  
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EXAMINER

BARAN, MARY C

ART UNIT

PAPER NUMBER

2857

MAIL DATE

DELIVERY MODE

07/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,115	<b>Applicant(s)</b> IWAIZONO, YOSHINORI	
	<b>Examiner</b> MARY C. BARAN	<b>Art Unit</b> 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. This action is responsive to the Amendments filed 20 June 2008. Claims 1-5 are pending. Claim 1 has been amended. Claim 6 has been cancelled.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. (U.S. Patent No. 6,114,839) (hereinafter Takano) in view of Franklin (U.S. Patent No. 5,240,022).

Referring to claim 5, Takano teaches a secondary battery control circuit (see Takano, Abstract), comprising:

a liquid detection section for detecting infiltration or generation of a liquid inside a secondary battery or inside a battery pack in which the secondary battery is installed (see Takano, column 8 lines 1-10 and lines 38-45);

and a control section for interrupting charging/discharging of the secondary battery in a case where a liquid is detected by the liquid detection section (see Takano, column 8 lines 38-56),

wherein the liquid detection section controls the control section (see Takano, column 8 lines 38-56) based on impedance or resistance value detected between two terminals (see Takano, column 7 line 66 – column 8 line 10 and Figure 1 “2b” and “2d”), but does not teach two electrically separated terminals, wherein an amount of an electrical current flowing through each of the terminals approaches zero, unless the liquid is detected by the liquid detection section.

Franklin teaches two electrically separated terminals (see Franklin, Figure 6 leak detection probes 18 and 19), wherein an amount of an electrical current flowing through each of the terminals approaches zero, unless the liquid is detected by the liquid detection section (see Franklin, column 10 lines 12-36).

The limitation, “wherein the electrically separated terminals are separated by a distance of about 0.1 millimeters” merely specifies a relative dimension. And, even without this limitation the claimed device still functions exactly as it would have if this specific dimension was included. Where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. See MPEP 2144.04.

Thereofre, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Takano to include the teachings of Franklin because maintaining a low current unless a liquid is present would have allowed the skilled artisan to determine a leakage condition (see Franklin, column 10 lines 33-36).

***Allowable Subject Matter***

3. **Claims 1-4** are allowed.

4. The following is an examiner's statement of reasons for allowance:

Claims 1-4 allowable over the prior art because the combination of limitations which recite a secondary battery control unit, comprising: a liquid detection section for continuously detecting infiltration or generation of a liquid inside a secondary battery or inside a battery pack in which the secondary battery is installed, wherein the liquid detection section includes a comparator having a first input connected to a constant current source and one of the terminals, and a second input connected to a reference voltage source is not found, taught or suggested in the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARY C. BARAN whose telephone number is (571)272-2211. The examiner can normally be reached on Monday to Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mary Catherine Baran/  
3 July 2008

/Eliseo Ramos-Feliciano/  
Supervisory Patent Examiner, Art Unit 2857